

X-Y MONITOR

PARTS CATALOG
& SCHEMATICS

PART #902-2132

WELLS GARDNER 19 IN. COLOR X-Y MONITOR
MODEL NO. 19K6401

PARTS LIST

DEFLECTION PC BOARD (P322)

Resistors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
R100	340X3150-934	15 ohm 5% 0.5W
R101	340X3150-934	15 ohm 5% 0.5W
R102	340X2102-934	1K ohm 5% 0.25W
R103	340X2102-934	1K ohm 5% 0.25W
R104	340X2101-934	100 ohm 5% 0.25W
R105	340C2101-934	100 ohm 5% 0.25W
R106	43X0477-002	22 ohm 10% 3W
R602	340X2471-934	470 ohm 5% 0.25W
R603	340X2471-934	470 ohm 5% 0.25W
R604	340X3362-934	3.6K ohm 5% 0.5W
R605	340X2910-934	91 ohm 5% 0.25W
R606	340X3822-934	8.2K ohm 5% 0.5W
R607	340X2471-934	470 ohm 5% 0.25W
R608	340X2101-934	100 ohm 5% 0.25W
R609	340X2240-934	24 ohm 5% 0.25W
R610	43X0401.056	1.5 ohm 5% 10W N.I.
R611	340X2390-934	39 ohm 5% 0.25W
R612	340X5680-733	68 ohm 5% 2W
R614	340X3122-234	1.2K ohm 5% 0.5W
R615	340X2100-934	10 ohm 5% 0.25W
R702	340X2471-934	470 ohm 5% 0.25W
R703	340X2471-934	470 ohm 5% 0.25W
R704	340X3362-934	3.6K ohm 5% 0.5W
R705	340X2910-934	91 ohm 5% 0.25W
R706	340X3472-934	4.7K ohm 5% 0.5W
R707	340X2471-934	470 ohm 5% 0.25W
R708	340X2101-934	100 ohm 5% 0.25W
R709	340X2240-934	24 ohm 5% 0.25W
R710	43X0401-056	1.5 ohm 5% 10W N.I.
R711	340X2390-934	39 ohm 5% 0.25W
R713	340X5680-733	68 ohm 5% 2W
R714	340X3132-234	1.3K ohm 5% 0.5W
R715	340X2100-934	10 ohm 5% 0.25W
R800	340X2103-934	10K ohm 5% 0.25W
R801	340X2333-934	33k ohm 5% 0.25W
R802	340X5222-743	2.2K ohm 10% 2W
R803	340X2333-934	33K ohm 5% 0.25W
R804	340X2155-934	1.5M ohm 5% 0.25W
R805	340X2155-934	1.5M ohm 5% 0.25W
R806	340X2221-934	220 ohm 5% 0.25W
R807	340X2221-934	220 ohm 5% 0.25W
R808	340X3271-934	270 ohm 5% 0.5W
R809	340X3271-934	270 ohm 5% 0.5W

DEFLECTION PC BOARD (P322)

Capacitors

Ref.	Part No.	Description
C100	45X0564-001	4700mf 63V Electrolytic
C101	45X0564-001	4700mf 63V Electrolytic
C102	45X0565-001	330mf 50V Electrolytic
C103	45X0565-001	330mf 50V Electrolytic
C104	80X0099-193	0.1mf 50V Disc Ceramic
C105	80X0099-193	0.1mf 50V Disc Ceramic
C106	343X5632-040	0.056mf 10% 400V
C107	45X0565-001	330mf 50V Electrolytic
C108	45X0565-001	330mf 50V Electrlytic
C600	80X0099-005	0.001mf 20% Z5F
C602	47X0786-006	0.22mf 50V
C603	46X0541-003	0.47mf 100V
C604	80X0099-193	0.1mf 50V Disc Ceramic
C701	80X0099-005	0.001mf 20% Z5F
C702	47X0786-006	0.22mf 50V
C703	46X0541-003	0.47mf 100V
C704	80X0099-193	0.1mf 50V Disc Ceramic
C800	45X0560-019	1.0mf 50V Electrolytic
C801	45X0560-019	1.0mf 50V Electrolytic
C802	45X0560-019	1.0mf 50V Electrolytic
C803	45X0560-019	1.0mf 50V Electrolytic

Semi-Conductors

D100	66X0079-001	Diode S5A2
D101	66X0079-001	Diode S5A2
D102	66X0079-001	Diode S5A2
D103	66X0079-001	Diode S5A2
D104	66X0071-001	Diode 1N4001
D105	66X0071-001	Diode 1N4001
D106	66X0071-001	Diode 1N4001
D107	66X0071-001	Diode 1N4001
D600	66X0070-001	Diode 1N914B
D601	66X0070-001	Diode 1N914B
D602	66X0071-001	Diode 1N4001
D603	66X0071-001	Diode 1N4001
D700	66X0070-001	Diode 1N914B
D701	66X0070-001	Diode 1N914B
D702	66X0071-001	Diode 1N4001
D800	7A036-001	L.E.D.
D801	66X0070-001	Diode 1N914B
D802	66X0070-001	Diode 1N914B
D803	66X0070-001	Diode 1N914B
D804	66X0070-001	Diode 1N914B
Q100	86X0125-001	Transistor MPSU07 (NPN)
Q101	86X0126-001	Transistor MPSU57 (PNP)
Q600	86X0127-001	Transistor TPS98 (NPN)
Q601	86X0127-001	Transistor TPS98 (NPN)
Q602	86X0127-001	Transistor TPS98 (NPN)

DEFLECTION PC BOARD (P322)

Semi-Conductors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
Q603	86X0126-001	Transistor MPSU57 (PNP)
Q604	86X0125-001	Transistor MPSU07 (NPN)
Q700	86X0127-001	Transistor TPS98 (NPN)
Q701	86X0127-001	Transistor TPS98 (NPN)
Q702	86X0127-001	Transistor TPS98 (NPN)
Q703	86X0126-001	Transistor MPSU57 (PNP)
Q704	86X0125-001	Transistor MPSU07 (NPN)
Q800	86X0072-001	Transistor (PNP)
Q801	86X0127-001	Transistor TPS98 (NPN)
Q802	86X0127-001	Transistor TPS98 (NPN)
ZD100	66X0040-027	Zener Diode ,46V, 5%, 1.0W
ZD101	66X0040-027	Zener Diode ,46V, 5%, 1.0W

Miscellaneous

F100	16X0185-001	Fuse 6.25A Slo-Blo
F101	16X0185-001	Fuse 6.25A Slo-Blo
F600	16X0184-001	Fuse 3A Normal Blow
F700	16X0184-001	Fuse 3A Normal Blow
P100	6A0394-007	Header, 7 Ckt
P101	6A0394-005	Header, 5 Ckt
P600	6A0394-007	Header, 7 Ckt
P602	6A0394-005	Header, 5 Ckt
P700	6A0394-007	Header, 7 Ckt
P701	6A0394-005	Header, 5 Ckt
P702	6A0394-005	Header, 5 Ckt
	43X0474-001	Thermistor PTC

NECK PC BOARD (P341)

Resistors

R500	340X2102-934	1K ohm 5% 0.25W
R501	340X2102-934	1K ohm 5% 0.25W
R502	340X2102-934	1K ohm 5% 0.25W
R503	340X2102-934	1K ohm 5% 0.25W
R504	340X2102-934	1K ohm 5% 0.25W
R505	340X2102-934	1K ohm 5% 0.25W
R506	340X2103-934	10K ohm 5% 0.25W
R507	40X0641-001	500 ohm, Green Control
R508	40X0641-001	500 ohm, Green Control
R509	40X0641-001	500 ohm, Green Control
R510	340X2432-934	4.3K ohm 5% 0.25W
R511	340X2431-934	430 ohm 5% 0.25W
R512	340X2432-934	4.3K ohm 5% 0.25W
R513	340X2431-934	430 ohm 5% 0.25W
R514	340X2432-934	4.3K ohm 5% 0.25W
R515	340X2431-934	430 ohm 5% 0.25W

NECK PC BOARD (P341)

Resistors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
R516	40X0641-004	15K ohm, Black Control
R517	40X0641-004	15K ohm, Black Control
R518	40X0641-004	15K ohm, Black Control
R519	340X5123-733	12K ohm 5% 2W metal oxide
R520	340X5123-733	12K ohm 5% 2W metal oxide
R521	340X5123-733	12K ohm 5% 2W metal oxide
R522	340X3272-244	2.7 ohm 10% 0.5W comp.
R523	340X3272-244	2.7 ohm 10% 0.5W comp.
R524	340X3272-244	2.7 ohm 10% 0.5W comp.
R525	340X3226-244	22M ohm 10% 0.5W comp.
R526	340X5102-733	1K ohm 5% 2W metal oxide
R527	340X3330-934	33 ohm 5% 0.5W
R528	340X4399-331	0.39 ohm 5% 1W metal oxide
R529	340X2123-934	12K ohm 5% 0.25W
R530	340X2123-934	12K ohm 5% 0.25W
R531	340X2123-934	12K ohm 5% 0.25W
R532	340X3182-944	1.8K ohm 10% 0.5W comp.
R534	340X2273-934	27K ohm 5% 0.25W
R535	40X0590-014	25K ohm Trim Pot.
R536	340X3392-944	3.9K ohm 10% 0.5W comp.
R537	340X3104-244	100K ohm 10% 0.5W

Capacitors

C500	80X0099-006	470mf 10% Z5F ceramic
C501	80X0099-006	470mf 10% Z5F ceramic
C502	80X0099-006	470mf 10% Z5F ceramic
C503	45X0569-004	2.2mf 350V Electrolytic
C504	80X0099-118	100pf 2KV 10%
C505	80X0099-061	0.01mf 1KV 20%

Semi-Conductors

D500	66X0070-001	Diode 1N914B
D501	66X0069-001	Diode 250V HS
Q500	86X0115-001	Transistor D40P3 (NPN)
Q501	86X0115-001	Transistor D40P3 (NPN)
Q502	86X0115-001	Transistor D40P3 (NPN)
Q503	86X0113-001	Transistor 2N3904 (NPN)
ZD500	66X0040-011	Zener Diode 4.3V, 5%, 0.5W
ZD501	66X0040-026	Zener Diode 18V, 5%, 1.0W

Miscellaneous

P500	6A0395-001	Header, 8 Ckt, 90°
	3A0636-001	PIX Socket

HIGH VOLTAGE PCB ASSEMBLY (P324)

Resistors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
R901	43X0477-001	3.9 ohm 10% 3.0W
R902	340X3279-944	0.27 ohm 10% 0.5W
R903	340X3039-934	3.9 ohm 5% 0.5W
R904	340X3471-934	470 ohm 5% 0.5W
R905	340X3561-934	560 ohm 5% 0.5W
R906	340X3682-934	6.8K ohm 5% 0.5W
R908	340X2102-934	1K ohm 5% 0.25W
R909	340X2104-934	100K ohm 5% 0.25W
R910	340X2123-934	12K ohm 5% 0.25W
R911	340X2682-934	6.8K ohm 5% 0.25W
R912	340X3150-834	15 ohm 5% 0.5W
R913	43X0401-057	560 ohm 10% 5W
R914	340X3151-934	150 ohm 5% 0.5W
R915	340X2102-934	1K ohm 5% 0.25W
R916	340X2332-934	3.3K ohm 5% 0.25W
R917	340X3033-934	3.3 ohm 5% 0.5W
R918	40X0590-014	25K ohm Trim Pot.
R919	340X2241-934	240 ohm 5% 0.25W
R920	340X3152-834	1.5K ohm 5% 0.5W
R921	340X2222-934	2.2K ohm 5% 0.25W
R922	340X2113-934	11K ohm 5% 0.25W
R923	340X2332-934	3.3K ohm 5% 0.25W
R924	340X2561-934	560 ohm 5% 0.25W
R925	340X2101-934	100 ohm 5% 0.25W
R926	340X5022-333	2.2 ohm 5% 2W
R927	340X3151-934	150 ohm 5% 0.5W
R928	340X4563-933	56K ohm 5% 1W

Capacitors

C901	45X0569-003	100mf 100V Electrolytic
C903	80X0099-134	0.015mf 100V ceramic
C904	349X1044-109	0.1mf 100V 20% mylar
C905	45X0568-001	33mf 63V Electrolytic
C909	45X0524-021	22mf 50V Electrolytic
C910	45X0524-036	10mf 300V Electrolytic
C911	46X0536-015	0.01mf polypropelene
C912	349X1041-100	0.1mf 100V 5% mylar
C913	80X0099-005	0.001mf 20% Z5F
C914	45X0569-001	47mf 50V Electrolytic
C915	80X0099-005	0.001mf 20% Z5F
C916	46X0536-016	0.035mf 400V 5% polypropelene
C920	80X0099-028	68pf 10% NPO

Semi-Conductors

D901	66X0083-001	Diode HS
D902	66X0068-002	Diode, Silicon
IC901	86X0134-001	I.C. NE555P
Q901	86X0071-001	Transistor MPSA06 (NPN)

HIGH VOLTAGE PCB ASSEMBLY (P324)

Semi-Conductors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
Q902	86X0071-001	Transistor MPSA06 (NPN)
Q903	86X0120-001	Transistor
Q904	86X0071-001	Transistor MPSA06 (NPN)
Q905	86X0116-001	Transistor 2N6557, Horiz. Driver
Q906		Transistor BU207

Miscellaneous

3A0614-001	Power Transistor Socket
3A0629-005	Housing, 5 Ckt, Amp #22
3A0627-003	Housing, Amp #350342-3

Transformer

T901	52X0126-001	Transformer, Horiz. Driver
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INTERFACE PC BOARD (P325)

Resistors

R200	340X2331-934	330 ohm 5% 0.25W
R201	340X2102-934	1K ohm 5% 0.25W
R203	340X2132-934	1.3K ohm 5% 0.25W
R204	340X2472-934	4.7K ohm 5% 0.25W
R205	340X2472-934	4.7K ohm 5% 0.25W
R206	340X2332-934	3.3K ohm 5% 0.25W
R207	40X0639-007	5K ohm, Control
R208	340X2470-934	47 ohm 5% 0.25W
R209	40X0639-006	2K ohm, Control
R210	340X2332-934	3.3K ohm 5% 0.25W
R211	340X2473-934	47K ohm 5% 0.25W
R212	40X0639-008	10K ohm, Control
R213	340X2392-934	3.9K ohm 5% 0.25W
R214	340X5102-733	1K ohm 5% 2W
R215	340X2562-934	5.6K ohm 5% 2W
R216	340X2273-934	27K ohm 5% 2W
R217	340X2103-934	10K ohm 5% 2W
R218	340X2472-934	4.7K ohm 5% 2W
R219	340X2472-934	4.7K ohm 5% 2W
R220	340X2332-934	3.3K ohm 5% 2W
R221	40X0639-007	5K ohm, Control
R222	340X2470-934	47K ohm 5% 0.25W
R223	40X0639-006	2K ohm, Control
R224	340X2332-934	3.3K ohm 5% 0.25W
R225	340X2473-934	47K ohm 5% 0.25W
R226	40X0639-008	10K ohm, Control
R227	340X2432-934	4.3K ohm 5% 0.25W
R228	340X5102-733	1K ohm 5% 2W
R229	340X2562-934	5.6K ohm 5% 0.25W

INTERFACE PC BOARD (P325)

Resistors

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
R230	340X2273-934	27K ohm 5% 0.25W
R231	340X2103-934	10K ohm 5% 0.25W
R249	340X2562-934	5.6K ohm 5% 0.25W
R250	340X2562-934	5.6K ohm 5% 0.25W

Capacitors

C200	45X0525-003	0.47mf 35V Electrolytic
C201	45X0525-003	0.47mf 35V Electrolytic
C202	45X0524-052	150mf 10V Electrolytic
C203	45X0524-052	150mf 10V Electrolytic

Semi-Conductors

D200	66X0070-001	Diode 1N914B
D201	66X0070-001	Diode 1N914B
D202	66X0070-001	Diode 1N914B
D203	66X0070-001	Diode 1N914B
D204	66X0070-001	Diode 1N914B
D205	66X0070-001	Diode 1N914B
D206	66X0070-001	Diode 1N914B
D207	66X0070-001	Diode 1N914B
IC200	86X0138-001	I.C. TL081CP
IC201	86X0138-001	I.C. TL081CP
Q200	86X0114-001	Transistor 2N3906 (PNP)
Q201	86X0113-001	Transistor 2N3904 (NPN)
VDR200	43X0470-001	VDR
VDR201	43X0470-001	VDR
ZD200	66X0040-017	Diode,Zener, 13V,5%, 1.0W
ZD201	66X0040-017	Diode,Zener, 13V,5%, 1.0W
ZD202	66X0040-028	Diode,Zener, 5.1V 5%, 0.5W
ZD203	66X0040-028	Diode,Zener, 5.1V 5%, 0.5W

Miscellaneous

J200	3A0618-005	PCB Connector, 5 Ckt
J201	3A0618-005	PCB Connector, 5 Ckt
P200	6A0394-004	Header, 4 Ckt

HIGH VOLTAGE UNIT ASSEMBLY

T900	53X0487-002	H.V. Transformer
	86X0128-001	Transistor BU409
	86X0118-001	Transistor BU207
	3A0624-001	Transistor Socket

FINAL ASSEMBLY PARTS

<u>Ref.</u>	<u>Part No.</u>	<u>Description</u>
Q102	86X0137-001	Transistor 2N3716X
Q103	86X0135-001	Transistor 2N3792X
	88X0145-506	PIX Tube, 19VNJP22
	38A5873-000	Degaussing Coil Ass'y
	38A5769-000	HV Unit
	2A0684-001	Lateral/ purity Ass'y
	9A2819-001	Yoke, Deflection
	9A2753-005	Degaussing Coil
	3A0624-001	Transistor Socket

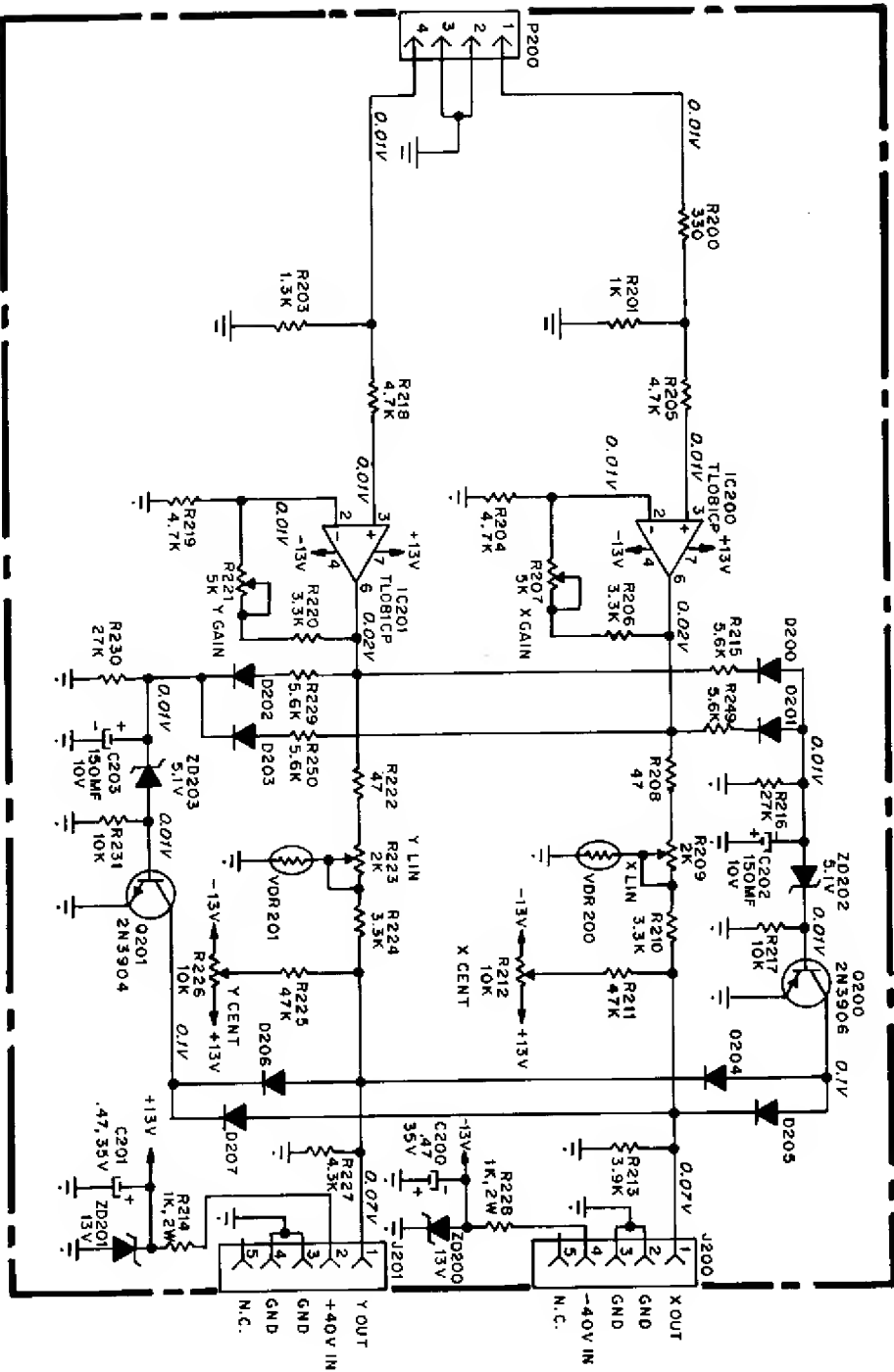
"Y" HEAT SINK ASSEMBLY

Q605	86X0123-001	Transistor 2N3716
Q606	86X0135-001	Transistor 2N3792X
Q607	86X0123-001	Transistor 2N3716
Q608	86X0135-001	Transistor 2N3792X
	340X4399-331	Resistor, 0.39 ohm 5% 1W
	3A0634-001	Transistor Socket

"X" HEAT SINK ASSEMBLY

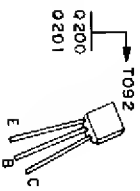
Q705	86X0123-001	Transistor 2N3716
Q706	86X0124-001	Transistor 2N3792
Q707	86X0123-001	Transistor 2N3716
Q708	86X0124-001	Transistor 2N3792
	340X4399-331	Resistor, 0.39 ohm 5% 1W
	3A0634-001	Transistor Socket

INTERFACE PCB (PLUG-IN) FOR MODEL 19K6401



GENERAL NOTES:

1. FOR DETAIL OF GENERAL NOTES SEE NOTES NO. 1, 2 AND 4 ON MAIN SCHEMATIC (19K6400 SERIES).



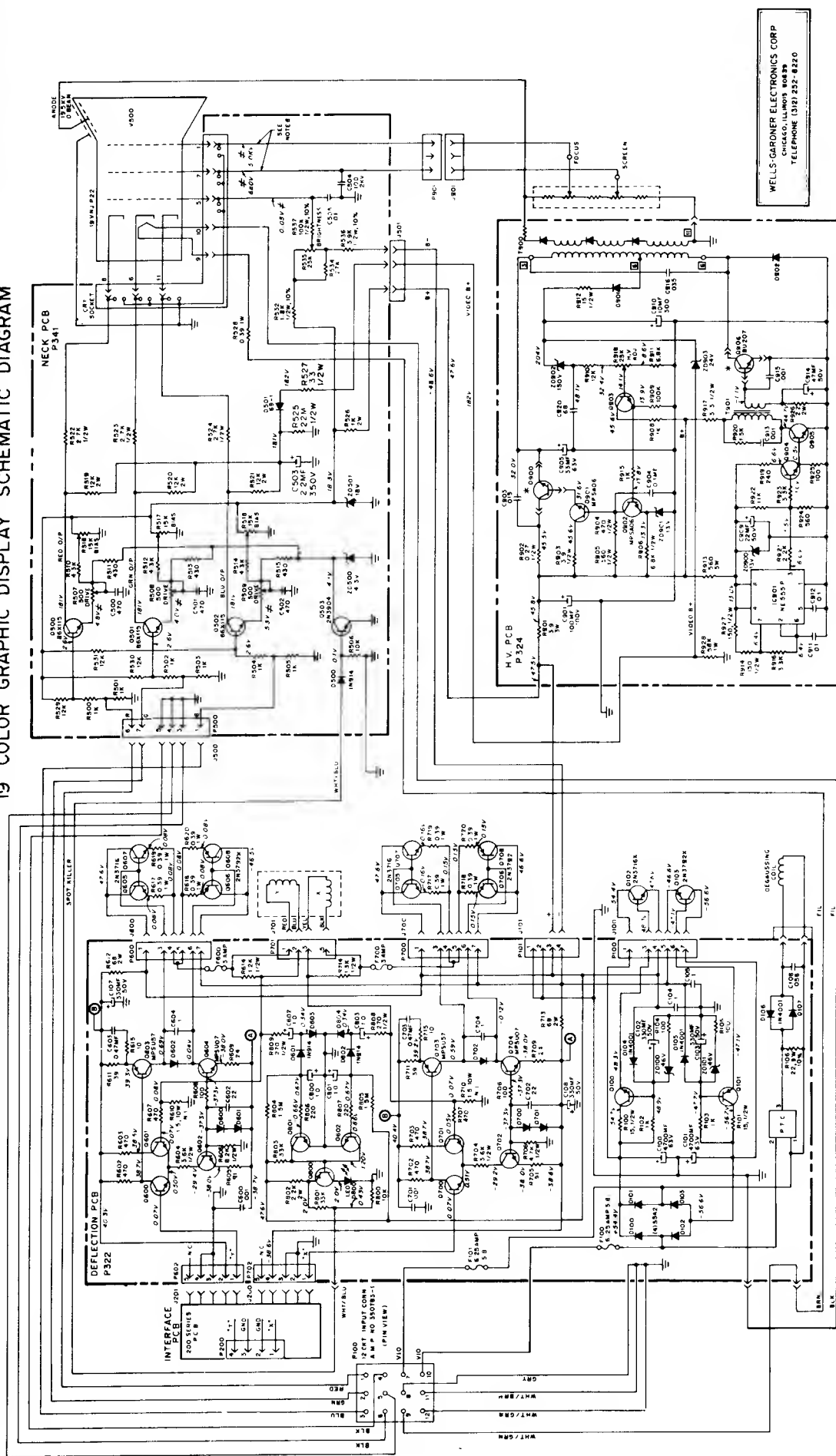
19K6401-5841

WELLS-GARDNER ELECTRONICS CORP.

CHICAGO, ILLINOIS 60639

TELEPHONE (312) 252-8220

19" COLOR GRAPHIC DISPLAY SCHEMATIC DIAGRAM



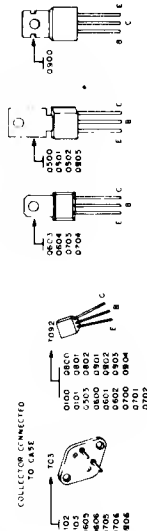
GENERAL NOTES

- GENERAL NOTES

* ALL D.C. VOLTAGES, \pm 10% MEASURED FROM POINT INDICATED TO GROUND USING A HIGH IMPEDANCE METER. VOLTAGES ARE MEASURED WITH NO SIGNAL INPUT AND CONTROLS ARE IN A NORMAL OPERATING POSITION.

5. # VOLTAGE VARIES WITH CONTROL SETTINGS

COLLECTOR CONNECTED



WELLS-GARDNER ELECTRONICS CORP
CHICAGO, ILL. 60639
TELEPHONE (312) 252-8220